Comparison Between DSS National Data Extracts and HERC Average Costs:

Aggregate and Person-Level Costs, FY2001

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1. Introduction

The VA currently has two sets of health care cost data: those from the Decision Support System (DSS) and those from the Average Cost Database (ACD) created by the Health Economics Resource Center (HERC). Researchers often need to decide which dataset should be used for their studies. Understanding the purposes and methods used to create the two datasets will help researchers make this choice.

This report is one of three comparisons of the two VA cost datasets at HERC. In this report we look at person-level annual costs; the other two reports compare inpatient and outpatient costs at the encounter level, respectively. We define person-level annual cost as the total VA health care cost incurred by one person within fiscal year 2001 (FY2001, the period October 1, 2000 – September 30, 2001). In Section 2, we describe the structural differences between the two datasets and the effects of these differences on cost estimates at various levels of cost aggregation. Section 3 addresses the difference between person-level and encounter-level costs, Section 4 provides methods, Section 5 reports the results, and section 6 provides recommendations for data selection.

2. Structural Differences

Structural differences are primarily due to the difference in the purpose of data development. HERC data are designed for research whereas DSS data are designed for management. We discuss these differences in detail below.

2.1 Cost inclusion and allocation

The two datasets differ in cost allocation at two levels. The first level of allocation is: the total national cost for patient care. The DSS dataset includes costs of national programs, and central and VISN offices, whereas the HERC dataset does not. These costs accounted for about 7% of the total cost in FY2001. Because national program costs are allocated proportionally to the direct costs of patient care, their inclusion causes cost to differ by a fixed proportion, but does not affect the relative difference between study groups. If absolute costs are important for a particular research project, the national program costs can be easily removed.

The two datasets also differ at a second level of allocation: the service category. HERC grouped inpatient and outpatient care into 23 categories (11 inpatient and 12 outpatient categories). The cost allocation in the HERC dataset is based on the cost-distribution report (CDR). Administrators in each medical center conduct the cost distribution in the CDR, and the proportions of resource allocation among service categories are not frequently updated to capture changes in how resources were actually used. In contrast, the DSS cost allocation is based on resource use reported by DSS staff at each medical center, and the data are updated monthly. Therefore, the DSS dataset is based on a more accurate allocation of workload among service categories. For example, the VA Allocation Resource Center (ARC) found that CDR allocated more costs than DSS to inpatient care because CDR did not capture the shift from inpatient to outpatient care in some VA medical centers. The ARC web site includes further information about CDR and DSS cost allocation. The ARC web site is a VA intranet site. VA employees can obtain its information from the VA Information Resource Center (http://www.virec.research.med.va.gov).

The DSS team is currently developing a Monthly Program Cost Report (MPCR) to replace CDR. If MPCR is approved, CDR will not be continued in fiscal year 2005. By that time, the

HERC Average Cost Datasets will be based on cost allocation in DSS MPCR. Thus, the difference in second-level cost allocation between DSS and HERC datasets will be substantially reduced.

2.2 Relative values

We use the notion of relative values to measure the relative intensity of resource use across health care services or procedures. For example, assuming that nursing time is the only resource used, if procedure A takes 30 minutes of nurse time and procedure B takes 15 minutes of nurse time, then the relative intensity of resource use for procedure A will be twice that for procedure B. Therefore, the relative value unit (RVU) for procedure A is 2 and the RVU for procedure B is 1. A procedure's RVU determines its weight for cost allocation. For example, if a clinic provides only 1,000 units of procedure A and 1,000 units of procedure B per year, and the total annual cost of this clinic is $300,000, then, given the knowledge of the procedures' RVUs, we can easily allocate $200,000 for procedure A and $100,000 for procedure B. The unit cost of providing procedure A will be $200 (200,000/1000) and the unit cost of providing procedure B will be $100. DSS measures actual resource use for each product or service. Because the mix of resource components (labor, materials, equipment, etc.) used for each product or service varies across medical centers, the DSS RVUs, as well as unit cost, also vary across medical centers.

HERC RVU

The HERC average-cost dataset is based on average relative values derived from the private sector. For outpatient care, we used RVUs from Medicare and other sources from the private sector (Phibbs et al. 2003) for resource allocation. For inpatient medical and surgical care, we used Medicare Diagnosis Related Groups (DRGs) with adjustment for length of stay and days in an intensive care unit to predict a relative weight for each hospital stay. For nursing home care,

we used Resource Utilization Groups (RUGs) to adjust for intensity of resource use. For other inpatient care, we simply used length of stay (LOS) to measure relative resource use. Although these assessments are defined in different ways, they share the same principle of RVUs: they all measure the relative intensity of resource use and determine the weighting for cost allocation across different products. In sum, the HERC cost allocation is based on the average relative weights in resource use for health care services and treatments in the private sector. A unique feature of the HERC dataset is that the RVUs of all providers and hospitals in the VA are assumed to be the same, or to share the same production function.

DSS RVU

RVUs in the DSS dataset are based on actual resource use (labor time, material cost, capital cost, etc.) recorded by the DSS team. For outpatient care, RVUs are developed for each service and procedure. For inpatient care, RVUs are established based on a daily measure of nursing time for each type of bed and treatment. Because the relative intensity of resource use differs across medical centers, RVUs are adjusted to reflect the actual resource use in a given medical center. Thus, RVUs created by the DSS may vary across medical centers for the same procedure or treatment.

2.3 Cost allocation

Inpatient

The workloads used to allocate cost in DSS and HERC datasets are different. For inpatient care, the two datasets are based on the same workload by design. Because DSS data must be generated shortly after the end of a fiscal year and the database cannot be updated once cost is allocated, a small number of inpatient stays are missed at the few sites that do not enter all data before the deadline. The HERC dataset is based on the Patient Treatment File (PTF), which is

usually closed later than the DSS NDE. Because of this discrepancy, a small number of hospital stays appear in the HERC, but not the DSS, dataset. In FY2002, unmatched inpatient stays accounted for less than 1% of the total number of inpatient stays.

Outpatient

The DSS and HERC outpatient files treat workload differently in several ways. First, the HERC workload for outpatient services is based on the encounters recorded in the NPCD SE file, whereas the DSS includes additional workload from VISTA and other VA outpatient databases. In FY2003, DSS allocated 16% of the total outpatient cost to services that were not included in the HERC dataset. Second, the HERC outpatient cost file does not include all outpatient pharmacy. It includes only pharmacy encounters that are recorded in the NPCD outpatient event file (the SE file.) These encounters only consist of consultation visits. (Those provided by a pharmacist.) *Please note that the HERC dataset excludes outpatient pharmacy costs from the total.* Third, the HERC dataset excludes the cost of prosthetics because the associated workload is not clearly identified in the SE file.   HERC staff assigned the average price in the private sector for each record of prosthetics in the SE file.

Because of these differences, HERC allocated 16% more cost to the services recorded in the SE file than did DSS. DSS had missed some SE records due to delayed data entry or other technical problems. In FY2002, about 6% of the records in the SE file were not found in DSS (Yu technical report #9). Therefore, the net cost difference at the aggregate level is less than 16%.

3. Person-level versus encounter-level costs

With these structural differences in mind, we can understand the basic differences between person-level and encounter-level costs. For person-level costs, the differences between the HERC and DSS datasets at the aggregate level still remain; the differences in RVU and workload are smoothed through aggregation. For example, if the DSS RVU for laboratory test A is higher than the HERC RVU, and the DSS RVU for laboratory test B is lower than the HERC RVU, then the absolute difference in cost at the person-level is smaller than the absolute difference at the encounter-level if a person has both test A and B within a given fiscal year. The most significant difference in cost assessment between person and encounter levels is for outpatient care. As we discussed in Section 2.3, DSS allocated 16% of outpatient cost to the workload that was not included in the HERC dataset. Thus, for NPCD recorded services, DSS costs at the encounter-level are generally lower than HERC costs. This difference, however, is smaller at the person-level because HERC allocated all outpatient costs to the NPCD workload.   The difference, overall, between DSS and HERC datasets should be smaller at the person-level than at the encounter-level.

4. Methods

We conducted this comparison in two levels. We first compared cost differences at the national level for the entire population. We then selected a random sample and compared costs at the person level.

4.1 Data and sample selection

Data from October 1, 2000 through September 30, 2001 (FY2001) was used for the comparison. We selected a 20% random sample for the person-level comparison. Because there

were discrepancies in the number of people included in each database, we excluded those who were in only one sample.

4.2 Adjustment

Adjustments were made to ensure the two sets of cost data were comparable:

1. We excluded pharmacy costs from both databases. As mentioned, the NPCD outpatient file (SE) included pharmacy costs only for consultation visits, whereas the DSS NDE included all outpatient pharmacy costs. Because of this difference, pharmacy costs are reported for the sake of information only; they are not for comparison.

2. We excluded prosthetics costs from both datasets because the HERC average-cost dataset does not provide costs for prosthetics, primarily due to inaccurate workload recorded NPCD. Again, we report these costs for the sake of information only.

3. In comparing outpatient costs from the two sources, we limited ourselves to the workload recorded in the NPCD outpatient file. In DSS, these records are flagged with the NPCD indicator variable.

4.3 Comparison

The person-level comparison was conducted from three perspectives. First, aggregate costs were compared for major types of health care services. Second, the correlation between annual person-level costs generated from the two different methods was examined. Third, costs were compared by common chronic conditions.

At the aggregate level, we compared total costs, inpatient medical and surgical costs, other inpatient costs, and outpatient costs. We also provided costs of outpatient pharmacy and prosthetics reported in DSS NDEs. We compared means, sums, and distributions of those cost categories.

To examine how person-level cost estimates from the two sources are correlated, we regressed DSS cost against HERC average cost. This was done for total cost and the three cost components. We examined geographic variations by including indicators for each VISN. VISN 22 was used as the reference.

To examine whether the cost difference is sensitive to certain medical conditions, we compared mean annual cost per person for common chronic conditions. We identified patients who had any of the 37 chronic conditions based on diagnosis data recorded in all VA inpatient and outpatient records in FY2001 [1]. We calculated the average costs (total and components) for each chronic condition. Because many people had multiple chronic conditions, this classification is not exclusive. Some people were included in multiple condition groups.

5. Results

In this section, we report results of cost differences in national aggregates, cost correlations at the personal level, and cost differences for people who have specific chronic conditions.

5.1 Differences in national aggregates (Table 1)

At the national level, HERC total cost was about $2 billion (11%) less than DSS total cost. DSS included costs of national programs, central offices, and VISN offices, versus HERC, which excluded these costs. In FY2001, these costs totaled $1.5 billion.

For medical and surgical inpatient care, the DSS total cost was $667 million less than HERC total cost. For other inpatient care, the two datasets recorded almost the same level of costs. For outpatient care, we compared the costs for health care services recorded in the NPCD event file, excluding pharmacy and prosthetics. We also reported the DSS non-NPCD costs. For services

recorded in NPCD, the DSS cost was $1.1 billion higher than the HERC cost, and DSS allocated $1.4 billion for "other outpatient activities."

The data demonstrated that DSS allocated more costs to outpatient care than to inpatient care. This discrepancy may have occurred because CDR was not updated promptly at some medical centers to reflect the shift from inpatient to outpatient care in recent years.

Table 1 also revealed that DSS has outliers. For example, the maximum total cost per person in DSS was $33 million. This was, most likely, due to errors.

5.2 Correlations between the two cost databases (Table 2)

Our regression analysis indicated that the annual person-level costs generated from the two data sets were highly correlated. Regression results appear in Table 2, where each column refers to a separate model. The R^2 values were 0.72 for the total cost model, 0.66 for medical/surgical inpatient model, 0.77 for other inpatient model, and 0.51 for outpatient model. In the regression of DSS costs against HERC costs, the estimated coefficient was 0.90 for total cost, 0.78 for inpatient medical/surgical cost, 0.90 for other inpatient cost, and 0.93 for outpatient cost. These estimated parameters show high correlation between the two datasets. For example, the coefficient of 0.90 in the total-cost model means that every dollar increase in the HERC average annual cost per person was associated with an increase of 90 cents in corresponding DSS cost.

The coefficients of the VISN indicator variables were often significant. For example, 15 of the 21 VISN indicators were statistically significant in the total cost model, indicating that the costs of these 15 VISNs were different from the reference VISN (VISN 22). These coefficients suggested systematic differences between the two cost datasets across the 22 VISNs although the presented results are subject to the selection of the reference VISN.

5.3 Cost differences by chronic disease (Table 3)

Because the average cost for inpatient care was very similar between the two databases, the differences in mean cost across the 37 chronic conditions varied, depending on the proportion of outpatient cost. This pattern, however, was primarily due to three systematic discrepancies discussed in section 2. From the aggregate analysis described in Section 2.1, we learned that DSS included $1.5 billion more in costs for national programs and for central and VISN offices than did the HERC dataset. Thus, both DSS inpatient and outpatient costs would be higher than HERC costs if the allocations were the same in the two datasets. Because the CDR-based HERC dataset allocated more cost for inpatient care than did DSS, the allocation difference offset the aggregate difference for inpatient costs. This explains why the net difference in average inpatient cost between the two datasets was small. Because DSS included more cost at the aggregate level and allocated more cost to outpatient care than did the HERC dataset, the difference in outpatient costs was substantial. But DSS also allocated 16% of its outpatient costs to services that were not included in NPCD. Thus, the cost difference for the services recorded in NPCD was smaller than the difference for the entire outpatient services (include DSS other outpatient cost) between the two datasets. Hence, study results would be more sensitive to those chronic conditions in which the outpatient cost accounts for a large proportion of the total.

To give another example, outpatient care accounted for 52% of the total cost for patients with PTSD and only 27% of the total for patients with lung cancer. Without including the DSS Other Outpatient Cost, the average total cost reported in DSS for patients with PTSD was 31% higher than that reported in the HERC dataset, and was 40% higher when DSS Other Outpatient Cost was included for lung cancer. These differences were only 10% and 16% respectively.

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The proportion of outpatient cost was not always the dominant factor in explaining cost differences between the two datasets. Although the proportion of outpatient cost was only 15% for patients with spinal-cord injury, for example, the total average cost reported in DSS was 31% greater than that reported by HERC without DSS Other Outpatient Cost. When the DSS Other Outpatient Costs were included, the total average DSS cost was 39% greater.

6. Recommendations

The decision about which cost dataset to select should be based on the purpose(s) of the study. Researchers should consider two sets of determinants. The first set comprises five elements that are based on the differences in dataset design. The second set comprises three elements that are based on empirical evidence provided by our person-level comparison.

6.1 Factors related to study design

Because of the differences in study design, researchers should consider the following five factors when choosing a cost dataset.

Generalizability

The cost allocation of the HERC dataset is based on relative weights from non-VA facilities (e.g., Medicare DRGs and RVUs). The HERC dataset therefore represents the pattern of health care production in the non-VA sector, whereas DSS represents that of VA. Further, the HERC cost dataset includes national estimates that eliminate the geographic variations in cost. The HERC dataset thus accords more easily generalized findings than those based on the DSS dataset.

Sensitivity

Whether a cost measure can reflect differences in medical treatment is an important issue for many studies, especially clinic trials. DSS has more power than the HERC Average Cost Dataset because DSS cost is based on the specific services provided to each patient. For example, the HERC inpatient cost may not identify variations in medical treatments for patients assigned the same DRG.

Actual cost

If a researcher wants to know exact costs of providing certain medical services at a specific facility or region, the DSS dataset offers advantages. First, DSS measures actual costs for each medical treatment and procedure. Second, DSS includes more outpatient services than does HERC data. HERC uses the National Patient Care Database (NPCD) encounters as its workload measure, whereas DSS augments NPCD encounters with other activities recorded in VISTA and/or other databases. DSS allocates costs to Addiction Severity Index (ASI) assessments, for example, whereas HERC data does not capture those assessments.

Pharmacy and Prosthetics

Because the NPCD database does not have complete or accurate data for outpatient pharmacy and prosthetics, costs for these services are reported only in DSS. HERC reports average private-sector prices for prosthetics. Consequently, for any study heavily influenced by these factors, DSS is the better choice.

Comparability to non-VA studies

The HERC and DSS datasets handle indirect costs in different ways. HERC excludes the costs that are not incurred to the non-VA sector whereas DSS includes all costs for the administrative purposes. For example, costs for central office and national programs (e.g., the geriatric care program) are excluded from the HERC dataset, whereas DSS includes these costs.

Subsequently, the costs included in the HERC average cost dataset are more comparable to non-VA studies than the DSS dataset.

6.2 Factors related to empirical evidence

If a study uses person-level costs, researchers should also consider the following three factors when choosing between the HERC and DSS datasets.

Cost allocation

As we discussed in Section 2.3, if a study requires only person-level costs, the differences in cost allocation among products (due to different RVUs) and between inpatient and outpatient services (due to CDR inaccuracy) have been worked out. Researchers should give priority to other factors.

Relative difference

As indicated in the regression analysis, if the study examines relative difference and uses person-level cost, the difference between the two datasets is small: The regression coefficients are all around 0.9. Thus, the decision to use the two datasets should be based on other factors.

Range of diseases studied

If a study focuses on a single disease or a few diseases, researchers should use the information presented in Table 3 to the degree to which their results would differ based on the dataset. The average mean costs for each service category (e.g., inpatient or outpatient) can also be used as ratios for necessary adjustments.

Reference

1.   Yu W, Ravelo A, Wagner T, et al. Prevalence and Costs of Chronic Conditions in the VA Health Care System. *Medical Care Research and Review.* 2003; 60(3 (Supplement to September 2003)): 146S-167S.

Table1. Comparison of DSS and HERC Personal Annual Costs by Category, FY2001

	N	Minimum	Mean	Maximum	Sum	Std Dev
Total Cost without Pharmacy and Prosthetics						
HERC National	4,217,138	0	3,554	1,603,873	14,986,373,317	13,317
HERC Local	4,217,138	0	3,554	3,892,398	14,986,597,914	13,588
DSS	4,268,972	0	3,937	33,021,122	16,806,982,910	21,174
Inpatient Medical/Surgical Costs						
HERC National	4,217,138	0	1,176	1,602,061	4,959,977,546	8,145
HERC Local	4,217,138	0	1,176	1,471,112	4,960,096,047	8,250
DSS	4,268,972	0	1,006	1,720,009	4,292,807,758	7,366
Inpatient Non-Medical/Surgical Costs						
HERC National	4,217,138	0	905	1,084,216	3,815,483,210	36,696
HERC Local	4,217,138	0	905	3,890,316	3,815,483,347	38,018
DSS	4,268,972	0	894	1,520,246	3,814,997,374	8,333
Outpatient Costs						
HERC National	4,217,138	0	1,473	247,029	6,210,912,562	2,907
HERC Local	4,217,138	0	1,473	257,621	6,211,018,520	2,934
DSS NPCD Workload	4,268,972	0	1,710	895,192	7,298,678,135	3,527
DSS Non-NPCD Workload	4,268,972	0	328	33,021,122	1,400,499,645	16,614
Pharmacy and Prosthetics Costs						
DSS Pharmacy	4,217,138	-5,488	726	5,164,247	3,061,169,154	4,089
DSS Outpatient Prosthetics	4,268,972	-1	107	1,622,029	457,780,952	2,017

Table 2. Regression Coefficients Between HERC Local and DSS Costs, FY2001

	DSS Total Cost		DSS Med/Surg		DSS Other Inpatient		DSS Outpatient	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
HERC Local Cost	0.900	1502.95	0.779	1275.4	0.903	1697.99	0.925	939.73
VISN 1	-154.329	-3.06	65.564	2.09	74.215	2.57	-361.845	-20.2
VISN 2	-371.709	-6.47	13.616	0.38	53.684	1.63	-322.272	-15.79
VISN 3	-73.422	-1.46	-49.651	-1.59	143.087	4.95	-44.481	-2.48
VISN 4	-297.760	-6.19	-144.759	-4.84	146.717	5.31	-313.751	-18.33
VISN 5	277.631	4.57	-158.362	-4.2	371.425	10.66	185.489	8.59
VISN 6	-495.706	-9.86	-199.839	-6.39	106.782	3.7	-203.336	-11.37
VISN 7	-159.022	-3.32	-13.150	-0.44	78.705	2.87	-144.558	-8.49
VISN 8	-472.390	-10.95	-86.499	-3.23	30.172	1.22	-310.200	-20.21
VISN 9	-67.511	-1.35	86.428	2.78	50.258	1.75	-107.805	-6.07
VISN 10	-266.386	-4.79	-40.168	-1.16	120.430	3.78	-59.490	-3.01
VISN 11	-280.434	-5.4	-13.021	-0.4	12.661	0.43	-216.643	-11.74
VISN 12	80.189	1.54	88.183	2.72	251.054	8.38	-331.714	-17.88
VISN 13	-185.936	-3.22	-150.784	-4.21	147.890	4.47	-82.236	-4.01
VISN 14	-81.664	-1.25	41.396	1.02	182.767	4.88	-335.577	-14.47
VISN 15	-252.862	-4.87	-85.536	-2.65	46.047	1.55	-143.519	-7.78
VISN 16	-278.185	-6.3	2.697	0.1	94.071	3.71	-212.613	-13.54
VISN 17	-227.167	-4.45	-82.597	-2.6	-4.003	-0.14	39.431	2.17
VISN 18	-346.571	-6.93	45.579	1.47	38.920	1.36	-290.263	-16.33
VISN 19	-27.278	-0.46	-168.416	-4.61	136.916	4.06	4.156	0.2
VISN 20	-30.471	-0.58	58.240	1.78	71.652	2.37	-212.633	-11.35
VISN 21	129.336	2.52	112.632	3.52	92.057	3.12	-26.066	-1.43
Intercept	1295.045	37.02	231.657	10.68	94.399	4.71	669.709	53.42
No. Obs.	841,090		841,090		841,090		841,090	
R²	0.729		0.659		0.774		0.514	

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Table 3. Average costs of common chronic diseases by category: HERC vs. DSS FY2001

CHRONIC CONDITIONS	N	MEG/SURG	Other Inpatient	Outpatient	Total
Acid related disorders					
HERC National	34806	3237	1377	2583	7197
HERC Local	34806	3159	1374	2542	7075
DSS	34806	3017	1615	3289	8382
DSS other outpatient				461	
Alzheimer's					
HERC National	5287	3750	6097	2226	12074
HERC Local	5287	3574	5854	2171	11599
DSS	5287	3146	6185	2745	13580
DSS other outpatient				1505	
Diabetes					
HERC National	152570	2272	1047	2166	5484
HERC Local	152570	2262	1068	2151	5481
DSS	152570	2133	1236	2664	6443
DSS other outpatient				411	
Hypertension					
HERC National	365027	1813	853	1889	4556
HERC Local	365027	1805	867	1882	4554
DSS	365027	1721	1006	2352	5416
DSS other outpatient				336	
Benign prostatic hyperplasia					
HERC National	81204	1964	876	2062	4902
HERC Local	81204	1947	903	2057	4907
DSS	81204	1860	1015	2559	5816
DSS other outpatient				383	
Hep C					
HERC National	16242	2948	2866	3583	9396
HERC Local	16242	3020	3060	3651	9731
DSS	16242	2921	3566	5018	12120
DSS other outpatient				615	
Stroke					
HERC National	17153	5351	2391	3087	10830
HERC Local	17153	5253	2380	3040	10672
DSS	17153	5021	2831	3710	12460
DSS other outpatient				898	

CHRONIC CONDITIONS	N	MEG/SURG	Other Inpatient	Outpatient	Total
Ischemic heart disease					
HERC National	155929	3021	965	2147	6132
HERC Local	155929	2995	976	2144	6114
DSS	155929	2805	1154	2610	6955
DSS other outpatient				386	
Headache					
HERC National	29772	1493	1119	2639	5251
HERC Local	29772	1497	1129	2638	5264
DSS	29772	1500	1286	3586	6802
DSS other outpatient				429	
Congestive heart failure					
HERC National	39317	7106	1974	2995	12075
HERC Local	39317	7083	2002	2985	12070
DSS	39317	6581	2419	3631	13289
DSS other outpatient				658	
Dementia					
HERC National	7317	4897	6687	3275	14859
HERC Local	7317	4785	6510	3220	14515
DSS	7317	4276	6928	3757	16907
DSS other outpatient				1945	
Asthma					
HERC National	22111	1891	823	2279	4993
HERC Local	22111	1884	880	2276	5040
DSS	22111	1794	1061	3012	6236
DSS other outpatient				368	
Low back pain					
HERC National	95392	1487	932	2452	4871
HERC Local	95392	1486	968	2448	4902
DSS	95392	1476	1152	3264	6286
DSS other outpatient				394	
Multiple Sclerosis					
HERC National	502	10180	12869	3952	27001
HERC Local	502	9870	13581	3917	27368
DSS	502	9573	16800	5383	35464
DSS other outpatient				3708	

CHRONIC CONDITIONS	N	MEG/SURG	Other Inpatient	Outpatient	Total
Arthritis					
HERC National	141100	1529	887	2143	4559
HERC Local	141100	1509	888	2130	4527
DSS	141100	1501	1030	2772	5671
DSS other outpatient				367	
Renal failure					
HERC National	18209	10313	2551	4311	17175
HERC Local	18209	10285	2684	4271	17239
DSS	18209	9881	3300	5433	19438
DSS other outpatient				823	
Injury					
HERC National	78451	3222	2330	3004	8557
HERC Local	78451	3239	2394	3013	8646
DSS	78451	3145	2825	4114	10711
DSS other outpatient				628	
COPD					
HERC National	84033	3943	1717	2478	8138
HERC Local	84033	3907	1726	2485	8118
DSS	84033	3688	1985	3100	9299
DSS other outpatient				525	
Depression					
HERC National	96968	1944	2256	2939	7139
HERC Local	96968	1952	2319	2951	7222
DSS	96968	1907	2711	3958	9158
DSS other outpatient				582	
HIV/AIDS					
HERC National	4092	3589	2017	3254	8860
HERC Local	4092	3739	2153	3238	9130
DSS	4092	3397	2484	5656	12148
DSS other outpatient				611	
Peripheral vascular disease					
HERC National	34569	5417	1725	2892	10034
HERC Local	34569	5423	1788	2904	10114
DSS	34569	5089	2081	3572	11337
DSS other outpatient				595	

CHRONIC CONDITIONS	N	MEG/SURG	Other Inpatient	Outpatient	Total
Parkinson's					
HERC National	7964	2632	2974	2026	7632
HERC Local	7964	2558	3004	2026	7588
DSS	7964	2466	3303	2538	9283
DSS other outpatient				976	
Spinal cord injury					
HERC National	4416	5228	11328	3188	19745
HERC Local	4416	5223	11893	3119	20236
DSS	4416	5082	14496	5331	26560
DSS other outpatient				1653	
Pneumonia					
HERC National	13755	15797	5527	3746	25069
HERC Local	13755	15500	5618	3731	24850
DSS	13755	14441	6709	4897	27147
DSS other outpatient				1100	
Substance Abuse					
HERC National	110827	2360	2309	2711	7379
HERC Local	110827	2366	2391	2736	7493
DSS	110827	2223	2684	3536	8928
DSS other outpatient				484	
PSYCHIATRIC DISORDERS					
Schizophrenia					
HERC National	22692	1851	6338	3967	12156
HERC Local	22692	1893	6469	4004	12367
DSS	22692	1719	6661	5005	14564
DSS other outpatient				1179	
PTSD					
HERC National	42364	1272	1939	3440	6650
HERC Local	42364	1288	2018	3522	6827
DSS	42364	1271	2472	4618	8952
DSS other outpatient				592	
Personality disorder					
HERC National	7763	1699	6959	4262	12921
HERC Local	7763	1704	7185	4319	13209
DSS	7763	1760	8620	6296	17566
DSS other outpatient				890	

CHRONIC CONDITIONS	N	MEG/SURG	Other Inpatient	Outpatient	Total
Bipolar disorder					
HERC National	16438	1551	4977	3604	10132
HERC Local	16438	1579	5134	3651	10364
DSS	16438	1577	5851	5089	13390
DSS other outpatient				872	
Borderline personality disorder					
HERC National	1802	1745	8010	4926	14680
HERC Local	1802	1791	8542	5027	15360
DSS	1802	1746	10349	7667	20635
DSS other outpatient				874	
Sociopathic Personality Disorder					
HERC National	1414	1942	10543	4418	16903
HERC Local	1414	1958	11135	4509	17602
DSS	1414	2245	14292	7163	24720
DSS other outpatient				1020	
Non-organic psychoses/paranoid states					
HERC National	10393	3404	6412	3798	13613
HERC Local	10393	3386	6755	3813	13954
DSS	10393	3213	7504	5110	17196
DSS other outpatient				1369	
Other psychiatric disorders					
HERC National	148895	2156	2324	2770	7250
HERC Local	148895	2149	2359	2778	7286
DSS	148895	2073	2706	3665	9065
DSS other outpatient				621	
CANCER					
Lung cancer					
HERC National	6656	9308	2310	4399	16017
HERC Local	6656	9392	2430	4379	16201
DSS	6656	8823	3001	5330	17964
DSS other outpatient				809	
Prostate cancer					
HERC National	30550	2288	883	2546	5717
HERC Local	30550	2327	930	2541	5799
DSS	30550	2205	1061	2976	6714
DSS other outpatient				472	

CHRONIC CONDITIONS	N	MEG/SURG	Other Inpatient	Outpatient	Total
Colorectal cancer					
HERC National	6563	6210	1181	3340	10731
HERC Local	6563	6102	1228	3308	10638
DSS	6563	5872	1464	3897	11836
DSS other outpatient				604	
All other cancers					
HERC National	60107	4312	1255	2958	8526
HERC Local	60107	4336	1311	2947	8594
DSS	60107	4229	1550	3667	10019
DSS other outpatient				573	